Appl. No. 09/760 7 Amdt. dated: Jul 10, 2003

Reply to Office Action of April 11, 2003



This listing of claims replaces all prior versions, and listings of claims in the instant application.

## Listing of Claims:

1. (Currently Amended) A method for retrieving images for display on an output device, said method comprising:

comparing an image, selected for display on the output device, with bitmaps stored in a cache;

retrieving a bitmap from a the cache, when the bitmap generates a matches with an the image selected for display on said output device; and

storing in the cache a bitmap representing the selected image, if the selected image does not generate a match with any bitmap stored on the cache.

- 2. (Original) The method of Claim 1, wherein: the image selected for display comprises a character associated with a font set.
- 3. (Original) The method of Claim 1, wherein said storing further comprises:

assigning a unique identifier to a bitmap stored in the cache.

4. (Currently Amended) The method of Claim 3, wherein said method further comprises:

including the unique identifier of a bitmap stored in the cache in a file sent to  $\frac{1}{2}$  output device.

5. (Currently Amended) The method of Claim 4, wherein said method further comprises:

retrieving from the cache the bitmap corresponding to the unique identifier in response to a request to display said file on said output device.



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6. (Currently Amended) The method of Claim 1, wherein: the cache comprises a linked list data structure having length elements.

7. (Original) The method of Claim 6, wherein a length element of the linked list data structure is associated with a unique length value and the elements of the linked list data structure are organized in order of increasing length values.

8. (Currently Amended) The method of Claim 6, wherein said storing a bitmap in the cache further comprises:

associating the bitmap with the length element of the linked list data structure corresponding to a length value of the bitmap.

9. (Currently Amended) The method of Claim 8, wherein associating the bitmap with the length element corresponding to the length value of the bitmap said storing a bitmap in the cache further comprises:

associating the bitmap with a width element corresponding to a width value of the bitmap, wherein the width element is associated with the length element corresponding to the length value of the bitmap.

- 10. (Original) The method of Claim 1, wherein the output device comprises a printer.
- 11. (Currently Amended) A computer program product comprising computer program code for a method for retrieving images for display on an output device, said method comprising:

comparing an image, selected for display on the output device, with bitmaps stored in a cache;



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retrieving a bitmap from a the cache, when the bitmap generates a matches with an the image selected for display on said output device; and

storing in the cache a bitmap representing the selected image, if the selected image does not generate a match with any bitmap stored on the cache

12. (Original) The computer program product of Claim 11, wherein

the image selected for display comprises a character associated with a font set.

13. (Original) The computer program product of Claim 11, wherein said storing further comprises:

assigning a unique identifier to a bitmap stored in the cache.

14. (Currently Amended) The computer program product of Claim 13, wherein said method further comprises:

including the unique identifier of a bitmap stored in the cache in a file sent to an the output device.

15. (Original) The computer program product of Claim 14, wherein said method further comprises:

retrieving from the cache the bitmap corresponding to the unique identifier in response to a request to display said file on said output device.

16. (Original) The computer program product of Claim 11, wherein:

the cache comprises a linked list data structure having length elements.

17. (Original) The computer program product of Claim 16, wherein:

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a length element of the linked list data structure is associated with a unique length value and the elements of the linked list data structure are organized in order of increasing length values.

18. (Currently Amended) The computer program product of Claim 17, wherein said storing a bitmap in the cache further comprises:

associating the bitmap with the length element of the linked list data structure corresponding to a length value of the bitmap.

19. (Currently Amended) The computer program product of Claim 1118, wherein said associating the bitmap with the length element corresponding to the length value of the bitmap storing a bitmap in the cache further comprises:

associating the bitmap with a width element corresponding to a width value of the bitmap, wherein the width element is associated with the length element corresponding to the length value of the bitmap.

- 20. (Original) The computer program product of Claim 11, wherein the output device comprises a printer.
  - 21. (Currently Amended) An apparatus comprising:
    - a processor; and

a memory coupled to said processor, and storing a method of retrieving images for display on an output device wherein upon execution of said method on said processor, said method comprises:

comparing an image, selected for display on the output device, with bitmaps stored in a cache;

retrieving a bitmap from a the cache, when the bitmap generates a matches with an the image selected for display on said output device; and

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storing in the cache a bitmap representing the selected image, if the selected image does not generate a match with any bitmap stored on the cache.

22. (Currently Amended) The apparatus of <del>claim</del>Claim 21, wherein:

the image selected for display comprises a character associated with a font set.

23. (Currently Amended) An output file format $\tau$  comprising:

a cache section including at least one bitmap associated with a unique identifier; and

a data section including a plurality of occurrences of at least one unique identifier associated with the at least one bitmap in the cache section, wherein each occurrence of a unique identifier is associated with a specified position, and for each occurrence of a unique identifier in the data section, an image represented by the bitmap associated with the unique identifier is displayed on an output device in the specified position.



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